

**DETROIT – Detroit Metropolitan Wayne County (DTW)**



## DETROIT – Detroit Metropolitan Wayne County Airport (DTW)

### Benchmark Results

- The capacity benchmark for Detroit Metropolitan Wayne County Airport today is 184-189 flights per hour (arrivals and departures) in Optimum weather, when visual approaches can be conducted.
- The benchmark decreases to 168-173 flights per hour in Marginal conditions, and to 136-145 flights per hour in IFR conditions, for the most commonly used runway configuration in these conditions. Throughput may be less when ceiling and visibility are low, or if adverse winds force the use of other runway configurations.
- Note that these benchmark rates do not always represent balanced operations. Rather, there are more departures than arrivals in the Marginal scenario, and more arrivals than departures in the IFR scenario. Also, the benchmarks are not necessarily representative of airport performance during arrival or departure peaks. If the facility reported rates are significantly unbalanced (i.e., unequal numbers of arrivals and departures), the benchmark rates will be unbalanced as well. The facility reported rates reflect current operations at the airport during a busy hour, but such unbalanced rates cannot be sustained for extended periods.
- A planned improvement, CEF, is expected to allow visual separation by suitably equipped aircraft in Marginal conditions. This would enable an increase in peak arrival rates in Marginal conditions.
- The benchmark rates for Marginal and IFR weather are based on arrivals to only two runways, 21L and 22R. The airport would have additional arrival capacity if it were possible to use three runways for arrivals. For example, Runways 22R and 22L (which are separated by 3000 feet) might be used for dependent approaches, while a third independent arrival stream would use Runway 21L. However, procedures for such mixed triple operations do not currently exist, nor are they included in OEP v5.0, and so such operations are not included in these benchmark results.
- The following charts compare actual hourly traffic with the calculated capacity curves for DTW. During busy time periods, DTW will operate close to the capacity curve; this may not be apparent in the charts because the busy periods typically span two separate hours.
- Please note that the new parallel Runway 04L/22R did not open until December 2001 and thus was not operational for much of the time period shown. Also, Runway 03L/21R was closed for maintenance after Runway 04L/22R was opened. Therefore, the historical data in these charts is not representative of the current capabilities of DTW with all runways available.

*These values were calculated for the Capacity Benchmarking task and should not be used for other purposes, particularly if more detailed analyses have been performed for the airport or for the individual programs.*

***The list of Planned Improvements and their expected effects on capacity does not imply FAA commitment to or approval of any item on the list.***

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<i>Weather</i>	<i>Scenario</i>	<i>Configuration</i>	<i>Procedures</i>	<i>Benchmark Rate (per hour)</i>
<b>Optimum Rate</b>  Ceiling and visibility above minima for visual approaches (3000 ft ceiling and 5 mi visibility)  <i>Occurrence: 74%</i>	<b>Today</b>	Arrivals on Runways 21L, 22L, 22R Departures on 21R, 22L <i>Frequency of Use: 73% in Optimum conditions</i>	Visual approaches, visual separation	<b>184-189</b>
	<b>New Runway</b>	N/A		<b>N/A</b>
	<b>Planned improvements (2013)</b>	Same		<b>189</b>
<b>Marginal Rate</b>  Below visual approach minima but better than instrument conditions  <i>Occurrence: 16%</i>	<b>Today</b>	Arrivals on Runways 21L, 22R Departures on 21R, 22L <i>Frequency of Use: 78% in Marginal conditions</i>	Instrument approaches, visual separation	<b>168-173</b>
	<b>New Runway</b>	N/A		<b>N/A</b>
	<b>Planned improvements (2013)</b>	Same	Visual approaches, visual separation	<b>187</b>
<b>IFR Rate</b>  Instrument conditions (ceiling < 1000 ft or visibility < 3.0 miles)  <i>Occurrence: 10%</i>	<b>Today</b>	Arrivals on Runways 21L, 22R Departures on 21R, 22L <i>Frequency of Use: 61% in IFR conditions</i>	Instrument approaches, radar separation	<b>136-145</b>
	<b>New Runway</b>	N/A		<b>N/A</b>
	<b>Planned improvements (2013)</b>	Same		<b>145</b>

**NOTE:** Data on frequency of occurrence of weather and runway configuration usage is based on FAA ASPM data for January 2000 to July 2002 (excluding 11-14 September 2001), 7 AM to 10 PM local time.

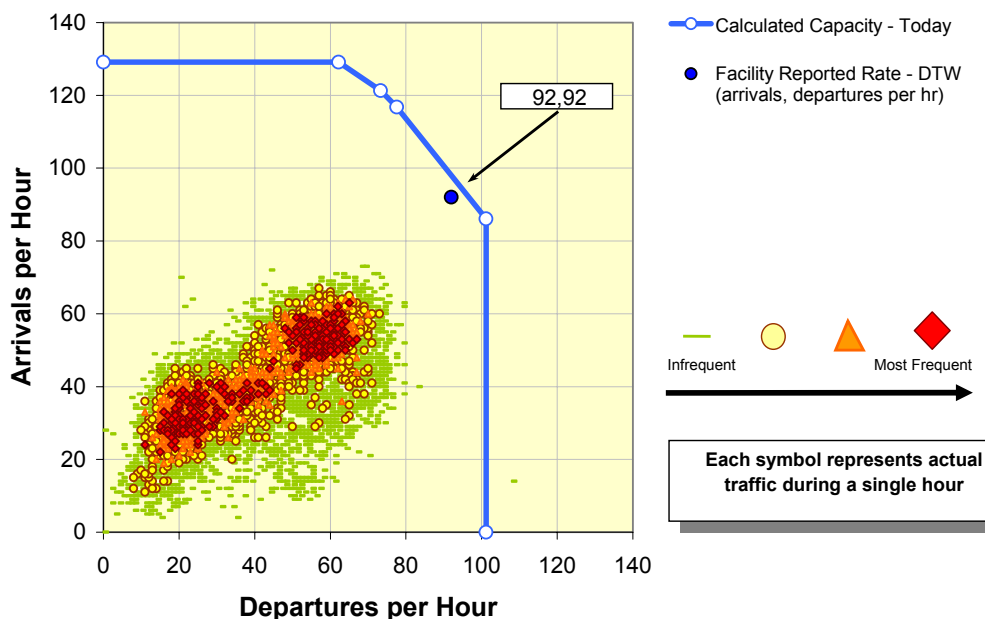
## Planned Improvements at DTW include:

- CEFR, for reduced in-trail separations between arrivals in Marginal conditions.

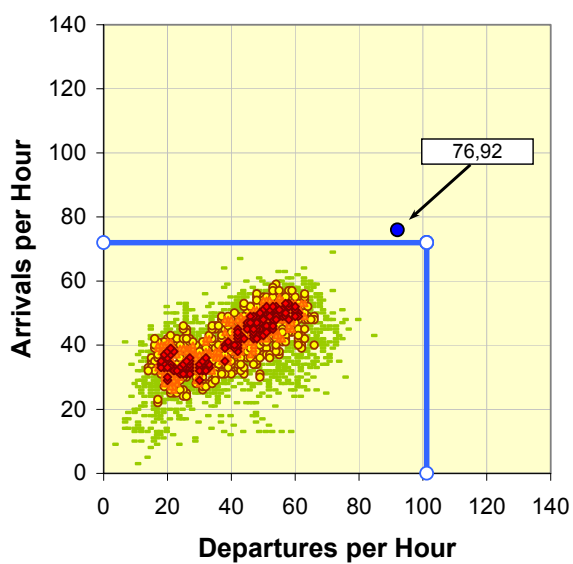
Additional information on these improvements may be found in the Introduction and Overview of this report, under “Assumptions.”

## Calculated Capacity (Today) and Actual Throughput

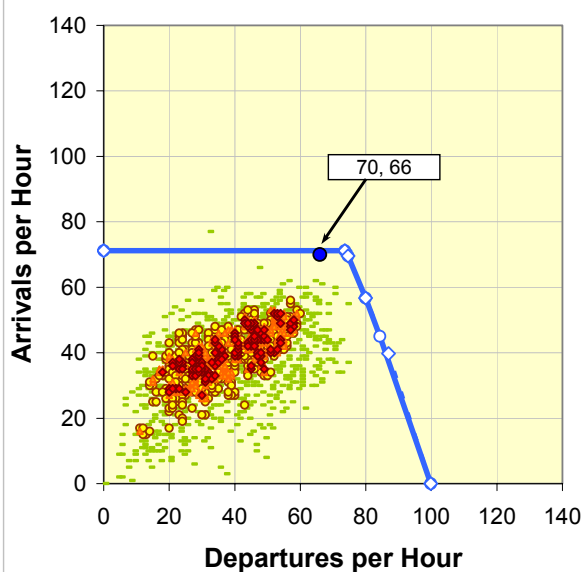
### Optimum Rate



### Marginal Rate



### IFR Rate



Hourly traffic data was obtained from the FAA ASPM database for January 2000 to July 2002 (excluding 11-14 September 2001), 7 AM to 10 PM local time. Facility reported rates were provided by ATC personnel at DTW.